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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,989	12/05/2001	Zvi Yaniv	12179-P095US	9325

7590

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EXAMINER

LE, THAO P

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/005,989

Applicant(s)

YANIV ET AL.

Examiner

Thao P Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 10-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 10-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11. 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### Priority

1. Acknowledge is made of applicants' claim for priority to provisional U.S. Patent application serial No. 60/254,374, filed December 8, 2000.

### *Oath/Declaration*

2. The oath/declaration filed on 02/04/02 is acceptable.

### *Information Disclosure Statement*

3. This office acknowledges of the following items from the Applicant:  
Information Disclosure Statement (IDS) filed on **03/04/03** and made of record as Paper No. 11. The references cited on the PTOL 1449 form have been considered.
4. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
5. Examiner took notice of remarks and amendment made on 04/14/03. Newly claims 19-31 were added.

6. Examiner withdrew the rejection made of Paper No. 10.
7. Claims 1-4 and 10-31 are pending for further examination.

**Claim Rejections**

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 4, 10, 13, 15, 18-19, 22-23, 26, 28, and 31 are rejected under 35 USC 102 (e) as being anticipated by Zhou et al., U.S. Patent No. 6,280,697.

Regarding to claims 1, 10, 15, 19, 23, and 28, Zhou et al. discloses an apparatus

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or method of forming the apparatus similar to what recited in claims 1, 10, 15, 19, 23, and 28. Zhou et al. discloses the apparatus and method of forming the apparatus including the carbon nanotubes deposited in a substrate and whereas the carbon nanotubes having intercalated material such as alkali metal (abstract).

Regarding to claims 4, 13, 18, 22, 26, and 31, Zhou et al. discloses that the alkali metal is intercalated into the carbon nanotubes.

### **Claim Rejections - 35 USC § 103**

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2-3, 11-12, 14, 16-17, 20-21, 24-25, 27, and 29-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al., U.S. Patent No. 6,280,697.

Regarding to claims 2-3, 11-12, 14, 16-17, 20-21, 24-25, 27, and 29-30, Zhou et al. discloses the apparatus and method of forming the apparatus including the carbon

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nanotubes deposited in a substrate and whereas the carbon nanotubes having intercalated material such as alkali metal (abstract). However, Zhou et al. doesn't disclose that the alkali metal is doped or deposited as a layer onto the carbon nanotubes layer. However, Zhou et al. discloses that the carbon nanotubes are capable of reacting and accepting alkali metal (abstract). Therefore, it would have been recognized in the art that the carbon nanotubes are react with alkali metal by depositing or doping the alkali metal into the carbon nanotubes.

12. If Applicants are aware of better art than that which has been cited, they are required to call such to attention of the examiner.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao P. Le whose telephone number is 703-605-1187. The examiner can normally be reached on Monday-Thursday 7:30am-6: 30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 703-308-4910. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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Thao Phuong Le

Examiner



HOAI HO  
PRIMARY EXAMINER